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"Understanding Callable Securities – The Bond Issuance Perspective"

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What is a Call Option?

Provides the issuer / borrower with the discretion to prepay bonds. Conditions of the option are specified at pricing, including:

- **Date or dates** upon which the bonds may be called
- **Notice period and frequency** of potential call dates (e.g., 30 days notice; on any day or any interest payment date)
- **Price or prices** (as percent of par) at which the bonds may be called (may vary by date call option is exercised)
- **Purpose --** whether call may be exercised for refunding or solely for redemption
- **Other** – e.g., whether call may be exercised for "extraordinary" reasons (e.g., excess project funds, surplus annual revenues, etc.) and at what price

Why Consider Issuing Callable Bonds?

Primary consideration is flexibility – Creates opportunities to respond to changing circumstances:

- **Achieve Refunding Savings**
  - Move down yield curve in future for seasoned maturities
  - Take advantage of lower interest rate environment
- **Restructure Debt Service Payments or Principal Amortization**
  - Reallocate fixed-rate/variable-rate maturities
  - Consolidate all issuances for a multi-year project or program
- **Apply Future Revenues to Redeem Principal**
  - Future revenues may provide adequate resources to redeem some or all of the bonds prior to maturity
- **Change Financing Terms**
  - Eliminate onerous or unnecessary bond covenants
  - Potential change in use may affect future tax status of the bonds

What Alternatives Exist?

Various instruments can facilitate trade-offs between flexibility and interest rate risk

- **Commercial Paper/BANs –** Most common use is to facilitate low-cost, early financing of multiple-phase projects; often "taken out" with long-term bonds; CP typically requires liquidity and/or credit support, BANs may not
- **Variable Rate Demand Bonds/Notes –** Can be re-marketed in daily, weekly or other reset modes, and may be put-back to issuer on periodic basis by investor; can be left outstanding to maturity or called with little notice; require outside liquidity support to ensure timely payment to investors
- **Auction Rate Securities –** Periodic repricing is done via auction, with no resulting need for outside liquidity support; can be left outstanding to maturity or called with little notice
- **Put Bonds –** Are fixed-rate bonds with a date-certain upon which the borrower my require the investor to "put them back" to borrower, and are priced to the yield at the put date; mechanisms for future rate reset are specified in advance for case where borrower does not redeem on put date

What Industry Standards Apply to Callable Muni Bonds?

Tax-exempt and taxable municipal bonds have different conventions.

- **Tax Exempt Muni Bonds Are Frequently Callable**
  - Standard call protection period runs 8-10 years
  - Some premium payment (e.g., 1-2% over par) may apply at the time of the call, but the call price declines to par as time goes on past the first call date
  - Yield "penalty" for maintaining the call option is relatively small for terms in the industry standard 8-10 years when yield to call date is considered, can rise slightly for call options between 5-7 years; Yield to maturity penalty is much higher

- **Taxable Municipal Bonds Are Rarely Callable**
  - Standard in taxable corporate bond market is non-callable; smaller taxable muni market largely forced to follow this convention.
  - Exceptions can be costly, and therefore borrowers usually want to consider alternative structures to achieve the desired flexibility
  - "Make whole" call options have been priced without upfront yield penalty; may be non-economical to exercise in future

How Does Time Affect Yield "Penalty" for Callable Bonds?

Yield implications of various call options show modest "penalty" for the call option on a yield to call date basis, but the long-term cost is higher if the call option goes unused

20-Year Bonds

5.00% Premium Coupon, Callable Bonds

Measured by Yield Spread to Non-Callable Bonds

	10-year Par Call	8-year Par Call	5-year Par Call
Yield to Call	3 bp	3 bp	5 bp
Yield to Maturity	25 bp	35 bp	45 bp

What is the "Value" of a Call Option?

Evaluation may include known costs/savings and "opportunity" costs

- **Interest Rate Savings / Costs**
  - *Waiving* the call option provides a lower cost of funds at issuance; this "savings" reflects the penalty to *maintain* the option to call bonds
  - The interest savings over the life of non-callable bonds mitigate at least some of the opportunity costs of foregoing future refunding opportunities
- **Opportunity Costs are Subjective**
  - Estimating theoretical "break even" value requires perspectives on direction of interest rates, probabilities of various interest rate scenarios, and timing of the conditions needed to make future refunding(s) cost-effective
  - Absence of liquid market for "detachable" tax-exempt call options makes "call option pricing models" complex and reliant on multiple assumptions

Issuers are well advised to focus attention on overall success of the transaction and achieving lowest "all in cost" under terms consistent with program needs

How Might An Issuer Decide What Approach to Take?

Case studies illustrate considerations and decisions:

- **State of California Economic Recovery Bonds**
  - High probability of surplus revenues from multiple sources led to diverse instruments (VRDB and put bonds, in addition to traditional callable bonds)
- **Riverside County Pension Obligation Bonds**
  - "Make whole call" utilized to preserve future flexibility without upfront yield penalty; Future interest payments to be foregone in event of early call are discounted at the then-current Treasury rate plus 12.5 bp
  - Make-whole provisions may not be cost-effective to exercise for refunding
- **City of San Jose Central Service Yard Expansion/Consolidation**
  - Finance construction costs with CP proceeds, move Main Yard activities into new facilities, use Main Yard sale proceeds to redeem CP
- **San Jose-Santa Clara Sewer Revenue Bonds**
  - Used refunding to reallocate fixed-rate and variable-rate maturities

Wrap Up and Q & A

Summary Comments

For More Information

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